

AMENDMENTS TO THE SPECIFICATION:

Add the following new section at the beginning of the specification:

Reference to Related Applications

This is a divisional application of prior application Serial No. 10/170,963, filed June 13, 2002.

Replace paragraph [0011] with the following amended paragraph:

[0011] Still a further object of the present invention is to provide a board to board connector having two connector components that are mateable with each other, and wherein the connector components include a plurality of terminal assemblies disposed therein, but electrically isolated from each other by grounding portions applied to exterior surfaces of the connector components, the two connector components being blind mateable and being capable being zippered into and out of engagement engagement with each other.

Replace paragraph [0014] with the following amended paragraph:

[0014] The interengagement means preferably utilizes a press fit type of engagement and in one embodiment, takes the form of recesses formed in the connector halves and opposing resilient resident engagement arms, pairs of which are received within each recess. The arms are slightly larger in spacing than the recesses and are split by an interengaging slot that provides them with a measure of resiliency so that they are slightly compressed when received by corresponding opposing recesses. Both the arms and recesses are conductively plated so that reliable electrical contact is made within the plane of the engagement means to ensure electrical isolation of the differential signal terminals held in the connector cavities from other differential signal pairs.

Replace paragraph [0070] with the following amended paragraph:

[0070] No matter what assembly process is used, the terminals 132, 133 preferably are vertically cantilevered and may be formed with a slight outward bias, so that the contact portion 140 of the terminals 132, 133 typically will extend away from the upstanding wall 135 of the terminal assembly 130. This is illustrated best as distance D in FIGS. 16 and 18. The contact portions 140 may be formed as semi-circular shapes, or any other desirable shapes, and preferably formed at the top of the body portions 142 of the terminals 132, 133. The terminals 132, 133 also

include tail portions 144 that may be bent at an angle as illustrated for surface mount applications, or they may extend straight for through hole mounting applications.

Replace paragraph [0074] with the following amended paragraph:

[0074] As best illustrated in FIGS. 2, 6 and 7, the other connector component 120 has its engagement means 150 in the form of a plurality of engagement arms or spring arms 154 that are formed in pairs and which are disposed on the side walls 124, 125 of the connector component 120 in spaced-apart order and which are aligned with the recesses 153. Each set of spring arms 154 has a pair of spaced-apart arms 155 that are separated by an intervening slot 156. This slot 156 permits the spring arms 154 to be moved toward each other when they are inserted into corresponding opposing recesses 153. As such, the set of spring arms 154 may be formed with a predetermined width **W2** that may be slightly greater than the width **W1** of the recesses 153. This ensures that a good frictional fit or a press-fit results when the two connectors are engaged together as shown in FIG. 7. The widths **W1**, **W2** can also be made the same during initial molding of the connector components and when the connector components 100, 120 are subsequently plated, the width **W1**, of the recesses 153 will diminish, while the width **W2** of the spring arms 154 will increase. The plating applies a layer of conductive material to the underlying housing, typically a dielectric material such as plastic, which increases and decreases the widths **W1**, **W2** by the thickness of the plating layer. The movement of the spring arms 154 occurs in longitudinal direction, preferably parallel to the longitudinal centerline **C** of the connector component. The force that each pair of spring arms 154 [[155]] exerts on its corresponding recess may be multiplied by the total number of spring arm pairs to obtain an approximate total retention force between the two connector components.

Replace paragraph [0077] with the following amended paragraph:

[0077] FIGS. 7 and 21 illustrate how the mechanical engagement features of the connector components also provide the desirable “encompassing” shields. This is done by way of the spring arms 154 extending into each corresponding recess 153 so that they substantially close off the recesses 153 except for the intervening slot 156 between the spaced-apart spring arms 155. This structure substantially closes off the fourth wall of each cavity and whereas the size of the

slot in each cavity is small enough compared to the overall extent of conductive material on the connector component that surrounds each cavity. The slot has no negative effect on the electrical isolation that is derived from the extent of the conductive plating. FIG. 21 is a lengthwise cross-section of two connectors of a style similar to FIG. 13 mated together.

Replace paragraph [0081] with the following amended paragraph:

[0081] FIG. 8 illustrates a hermaphroditic connector component 200 that includes a dielectric, insulative housing 201 defined by a pair of side walls 203, 204 and two end portions 205, 206. A series of transverse walls 209 extend between the side walls 203, 204 and define compartments, or sections 210, of the connector housing. These compartments are further subdivided into two subcompartments 211 by a center wall 207 that may either be one single wall or a series of segments that bridge the gap between two transverse cross walls 209 or the end walls 205, 206. In the embodiment 200, the engagement means 220 is disposed along the center of the connector component 200, and preferably along the center wall 207 thereof. These engagement means 220, includes alternating recesses 221 and spring arms 222. The keying, or polarizing feature, of this connector 200 includes projections 230 at one end of the connector component and cavities 231 at the other end. These “keys” extend cross-wise of the connector housing and therefore the same component can be used for each connector half, except rotated 180° from the other component. The connector housing may further include alternating tongues 235 and grooves 236 formed in the sidewalls 203, 204 of the connector component 200. In the connector component 200, illustrated in FIG. 8, two such components may be used to provide a connection between two opposing circuit boards, rather than one style of connector component used for one of the two circuit boards and another style connector component used for the other of two circuit boards.